



April 2011

THE LICKING LEDGER

*A Joint Publication of the Licking River Watershed Watch and the Sierra Club Northern Kentucky Water Sentinels
Serving the Entire Licking River Region*

Mark Your Calendar

The schedule for the upcoming 2011 sampling events has been set as follows:

May 14, 2011—regular sampling for lab analysis

June 1-14, 2011—Habitat/Bio assessments

October 1, 2011—field tests only, no lab samples

Attention Volunteers!

Due to budget constraints grab samples for lab analysis will only be collected in May. Be assured, your dedication is very much appreciated and hopes are that finances will put us back on track in the future.

New Officers

The LRWW Steering Committee officers for 2011 are:

Chair:

Lajuanda Haight-Maybriar

Vice-Chair:

Barry Tanning

Treasurer:

April Haight

Secretary:

Pam Kutscher

Another Conference has come and gone....



Although attendance was down a bit this year, possibly due to exceptionally nice weekend weather, the 2011 LRWW Annual Conference was again a success.

2010 Sampling Results

Dr. Chris Lorentz, our Science Advisor from Thomas More College and **Mindy Scott**, our Science Advisor from SD1, reported on biological and chemical analysis and bacteria and nutrient sampling results. They both agreed that 2010 was a good sampling season. Despite the challenges of Spring flooding and Summer drought throughout parts of the watershed, a large percentage of sites were sampled with good data obtained. Streamside chemistries were within desirable parameters for most

sites though a few were consistently out of range.

The May sampling event followed heavy rains and flooding a week prior and 72% of the samples had E. coli levels exceeding the standard. Although rain had dropped off by the July sampling event, there had been up to 1.5" of rain in some areas and 75% of the July samples exceeded the standard. By October, most of the watershed was in severe drought status with many streams dried up or pooled. Still there were 54 total samples collected and, with no runoff issues, only 24% exceeded the standard. One site on Allen Fork in Boone County was well below the E.coli standard (240 cfu, or "colony forming units") all three sampling events. On the flip side, a site on Taylor Creek was a "repeat offender" from previous years and greatly exceeded the standard all three months with a high in July of almost 40,000 cfu.

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Conference continued:

Mindy also mentioned the importance of the **Nutrient Sampling**, testing for Total Nitrogen and Total Phosphorus, which was done in Boone, Kenton, and Campbell counties. The increased concern for nutrient levels in waterways is being driven by the “Dead Zone” in the Gulf of Mexico. Excesses of nitrogen and phosphorus contribute to lowered dissolved oxygen, excess algae growth and lowered ability of the stream to support diverse aquatic life. Sources of excess nutrients include wastewater treatment plants & septic systems, fertilizer runoff from lawns and cropland, and runoff from manure storage systems & pastures. The 2010 testing did show up some problem areas that need further evaluation.

Microbial Source Tracking

Geoff Gerner, our Science Advisor from the Department of Biology and Chemistry at Morehead State University, discussed ways to track bacterial contamination to its source. Though simple E.coli testing can show the presence and indicate concentration of bacterial contamination, it doesn’t pinpoint the source (native wildlife, failing septic, leaking sewers, pasture runoff, etc.). Knowing where the contamination source is and what species is involved helps deter-

mine management and remediation. Various methods have been developed to track back to the source.

One set of methods is known as “*Library Dependent*” because they require results to be compared to a “library” of knowns. These include the “Antibiotic Resistance” method which is the least accurate, “DNA Fingerprinting” which is more reliable as to species but has to be compared to DNA from the same area, and “Phage Typing” which is the most accurate and involves using various viruses that react only with certain types of E.coli.

The other set of methods is known as “*Library Independent*”. Among these types are “Polymerase Chain Reaction” which uses detection markers and “Specific Gene” which searches for known genes such as a toxin gene that is present in some strains of E.coli or antibiotic resistant genes.

Each method has its advantages and disadvantages depending on the particular situation.

What’s Shakin’ in the Basin

Lajuanda Haight-Maybriar and **Barry Toning** gave a rundown on what’s been happening in the watershed this past year.

Agricultural Issues— Much acreage which had historically been used for growing tobacco growing and was later converted to cattle

pasture (which increased manure contamination of streams) could potentially now be converted back to row crops— specifically soybeans as the price of that commodity is up significantly.

Since the price of milk has fallen several fold in the last ten years, the number of dairy farms has fallen, reducing that source of manure runoff into streams.

Hinkston Creek Project— Hinkston Creek flows through Montgomery, Bourbon, Nicholas and Bath counties, much of it through cattle pastures where the animals have access to the stream. Originally mostly cane land forest, riparian deficiency along the stream is also a major problem. The Hinkston Creek project has several management goals: stabilize channels and vegetation, control livestock creek access, manage pasture grass cover, clean up pavement runoff, control sediment runoff. Signs denoting the project area are being put up at watershed boundaries and creek/road crossings. Billboards are also being utilized, encouraging people to “Thank a Farmer” for protective buffers and also noting ways to help reduce runoff. For more information on this project and also to view the clever billboards, visit the website at: www.hinkstoncreek.org

Conference continued:

Agricultural issues, funding and BMPs in the watershed:

Curtis Rosser, NRCS District Conservationist & **Emily Anderson**, Fleming County Watershed Coordinator talked about some of the programs and recommended Best Management Practices (BMPs) available to farmers and landowners to help improve soil conservation and water quality. All programs are voluntary.

BMPs include: fencing livestock out of streams to prevent erosion, sedimentation and fecal contamination; grassed waterways through crop fields; timber stand improvement; nutrient management, and many more.

There are many cost-share programs available to help farmers pay for implementing these BMPs.

Among the most popular are Federal programs such as EQUIP, CRP, WRP, WHIP & CSP. At the state level are soil erosion and water quality cost share programs and on the local level are the Kentucky Agricultural Development Fund and County Agricultural Investment Program (CAIP). Technical assistance and advice from any of these programs is free. Farmers can contact their county Agricultural Extension Agent for more information. Information for USDA, NRCS, FSA can be found online at:

<http://offices.sc.egov.usda.gov/locator/app?state=ky&agency=fsa>. This site has links to various agencies in Kentucky.

Awards 2011



Outgoing Chair, April Haight, presented Outstanding Volunteer Service Awards to Barry Toning and Mindy Scott. Each received a framed photo set depicting the Licking River headwaters and also its confluence with the Ohio River.



Incoming Chair, Lajuanda Haight-Maybriar, with Dr. Chris Lorentz who was recognized for 10 years of volunteer service.

Also recognized for 10 years of volunteer service were Donald Becher, Mark Rohling, Dinah DeVoto, Alice Ryle and Rick Stegeman.

Recognized for five years of volunteer service were Gloria and Tim Guilfoile, Mike Arnold, Joy Cloud, Dianna & Ralph Bartles, Donna Becher, Sean Blake, Debtra Franks-Messer and William D. Christopher.

HELP US OUT

Due to merging databases over the last couple of years and some software incompatibility, our list of those volunteers who should have been recognized for 5 and 10 years of continuous service to LRWW (as samplers or in another capacity) may be incomplete.

If you, or someone you know of, has been passed up for service recognition, (this year or last) please let us know. You can contact the newsletter editor (see last page for contact info) and we will set our records straight.

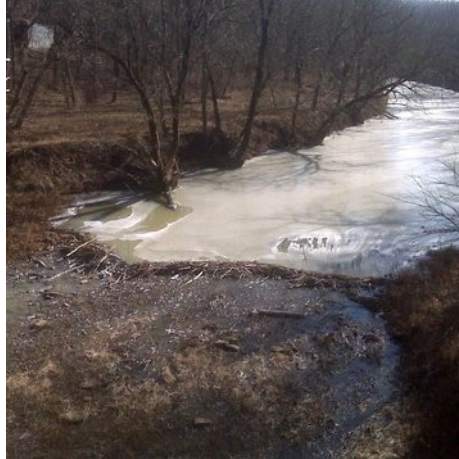
Hinkston Creek Watershed Planning Project

Visit the web site for photos, history, assessment information and more:

www.hinkstoncreek.org

Views of the Licking

This page is devoted to your photos of the Licking River Watershed.



Above three photos were taken by Gary Turney on Grassy Creek in Pendleton County. The first is a Blue Heron rookery, the second is a beaver dam. The third is Gary's granddaughter showing a tree that has been gnawed on by beaver.



A beaver den on Grassy Creek . Photo taken in 2010 by Gary Turney

Licking River at Butler . Photo taken 2009 by Pam Kutscher

Habitat assessment. From website file,—location and participants not identified.

We need your photos for future issues! Please send your favorite photos (editor contact info at right) taken of your favorite stream in the Licking River watershed, whether they be of scenery, wildlife, recreation or festive events. If possible, let us know who took the photo and where it was taken (name of stream and area) and anything else about the photo you want to say. Please be aware that any photos may be used by the LRWW to promote the organization and to raise awareness of the watershed issues.

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